

Listing of the Claims

Claim 1 (Original) A method for controlling an automated clutch of a motor vehicle having an engine with a crankshaft and a transmission with a transmission input shaft and a transmission output shaft, wherein the automated clutch is arranged to transmit a clutch torque between the crankshaft and the transmission input shaft, and wherein during at least one operating phase of the vehicle, the automated clutch is controlled dependent on an engine rpm-gradient (dn_m/dt), the method comprising:

- a) determining a first engine rpm-gradient signal ($dn_m(M)/dt$) based on an engine torque signal (M_e) and a target value (M_k) of the clutch torque;
- b) recursively determining an engine rpm-rate signal ($n_m(R)$) based on said engine rpm-gradient signal;
- c) comparing an actual engine rpm-rate (n_m) to said engine rpm-rate signal ($n_m(R)$) and determining a correction quantity K based on said comparison; and
- d) correcting said first engine rpm-gradient signal ($dn_m(M)/dt$) with said correction quantity.

Claim 2 (Original) The method of claim 1, wherein the first engine rpm-gradient signal ($dn_m(M)/dt$) is based on a torque difference between the engine torque signal (M_e) and the target value (M_k) of the clutch torque.

Claim 3 (Original) The method of claim 1, wherein the correction quantity K is based on a torque difference between the actual engine rpm-rate (n_m) and said engine rpm-rate signal ($n_m(R)$).

Claim 4 (Original) The method of claim 1, wherein the correction quantity K is assigned a predetermined weight in said correcting of the first engine rpm-gradient signal.

Claim 5 (Original) The method of claim 1, further comprising the step of compensating a time lag occurring between a time when a signal is generated and a time when said signal is used in the method.

Claim 6 (Currently Amended) The method of claim 1, further comprising the step of compensating a time lag occurring between a time when the engine rpm-rate signal ($n_m(R)$) is generated and a time when the actual engine rpm-rate (n_m) is determined.

Claim 7 (Original) The method of claim 5, wherein the signal comprises the engine torque signal (M_e).

Claim 8 (Original) The method of claim 5, wherein the signal comprises the engine rpm-rate signal ($n_m(R)$).

Claim 9 (Original) The method of claim 1, wherein the engine rpm-gradient (dn_m/dt) is used to determine a characteristic quantity of the clutch.

Claim 10 (Original) The method of claim 9, wherein said characteristic quantity of the clutch comprises a friction value (RW) approximating a physical friction value of the clutch.

Claim 11-23 (Canceled)

Claim 24 (Original) The method of claim 1, further comprising the steps of determining and correcting a movement-opposing torque of the vehicle.

Claim 25 (Original) The method of claim 24, wherein the movement-opposing torque is corrected by means of correction values that are given as a characteristic curve in function of an air resistance.

Claim 26 (Original) The method of claim 24, wherein the movement-opposing torque is corrected dependent on a grade angle of a road being traveled by the vehicle.

Claim 27 (Original) The method of claim 24, wherein the movement-opposing torque is corrected by means of a correction signal, and wherein said correction signal is determined based on at least one error between an estimated value and an actual value of at least one quantity.

Claim 28 (Currently Amended) The method of claim 27, wherein the at least one quantity comprises an engine rpm-rate (n_m), wherein the estimated value is based on an

effective engine torque, and wherein the at least one error comprises a first error based on a comparison between the estimated value and the actual value of the engine rpm-rate (n_m).

Claim 29 (Currently Amended) The method of claim 27, wherein the at least one quantity comprises ~~comprises~~ a traveling-speed related quantity, wherein the estimated quantity is based on an effective engine torque, and wherein the at least one error comprises a second error based on a comparison between the estimated value and the actual value of the traveling-speed related quantity.

Claim 30 (Original) The method of claim 29, wherein the traveling-speed related quantity comprises a wheel rpm-rate.

Claim 31 (Original) The method of claim 29, wherein the effective engine torque is corrected with an estimated value for a transmitted clutch torque.

Claim 32 (Original) The method of claim 28, wherein said first error is used to correct at least one estimated quantity.

Claim 33 (Original) The method of claim 29, wherein said second error is used to correct at least one estimated quantity.